

What Is Claimed Is:

- 1 **1** A computer implemented method of enabling an object-oriented application to
2 access in an object-oriented manner a procedural operating system having a
3 native procedural interface during run-time execution of the application in a
4 computer having a memory component, the method comprising the steps of:
 - 5 (a) locating in the application an object-oriented statement which accesses a service
6 provided by the operating system;
 - 7 (b) translating the object-oriented statement to a procedural function call
8 compatible with the native procedural interface of the operating system and
9 corresponding to the object-oriented statement; and
 - 10 (c) executing in the computer the procedural function call to thereby cause the
11 operating system to provide the service on behalf of the application.
- 1 **2** The method of claim 1 in which an object-oriented class library includes related
2 object-oriented classes having class methods for accessing services provided by
3 the operating system using procedural function calls compatible with the native
4 procedural interface of the operating system, wherein the object-oriented
5 statement located in the application is defined by the class library, further
6 comprising the step of storing in the memory component a code library
7 comprising computer program logic implementing the object-oriented class
8 library.
- 1 **3** The method of claim 2, wherein step (b) comprises the steps of identifying one
2 or more methods in the class library corresponding to the object-oriented
3 statement, and copying the identified methods to a portion of virtual memory in
4 the computer previously allocated to the application, and wherein step (c)
5 comprises the step of executing the identified methods.

- 1 4. An apparatus for enabling an object-oriented application to access in an object-
2 oriented manner a procedural operating system having a native procedural
3 interface, the apparatus comprising:
- 4 a) a computer;
- 5 (b) a memory component in the computer;
- 6 (c) a code library, stored in the memory component, comprising computer program
7 logic implementing an object-oriented class library, the object-oriented class
8 library comprising related object-oriented classes for enabling the application to
9 access in an object-oriented manner services provided by the operating system,
10 the object-oriented classes comprising methods for accessing the operating
11 system services using procedural function calls compatible with the native
12 procedural interface of the operating system; and
- 13 d) means, in the computer, for processing object-oriented statements contained in
14 the application and defined by the class library by executing methods from the
15 class library corresponding to the object-oriented statements.
- 1 5. The apparatus of claim 4, wherein the means for processing the object-oriented
2 statements operates in the computer during run-time execution of the
3 application.

6. A computer implemented method of enabling an object-oriented application to access in an object-oriented manner a procedural operating system having a native procedural interface during run-time execution of the application in a computer having a memory component, in which an object-oriented class library comprises related object-oriented classes having class methods for accessing services offered by the operating system using procedural function calls compatible with the native procedural interface of the operating system, the application including object-oriented statements defined by the class library to access the operating system services, the method comprising the steps of:

- (a) storing in the memory component a code library comprising computer program logic implementing the object-oriented class library; and
- b) processing the object-oriented application in the computer by executing methods from the class library corresponding to the object-oriented statements in the application.

1 7. An apparatus for providing an object-oriented interface to a procedural
2 operating system having a native procedural interface, the apparatus
3 comprising:

4 a) a computer;

5 (b) a memory component in the computer; and

6 (c) a code library, stored in the memory component, comprising computer program
7 logic implementing an object-oriented class library, the object-oriented class
8 library comprising related object-oriented classes for enabling an object-oriented
9 application to access in an object-oriented manner services provided by the
10 operating system, the object-oriented classes comprising methods for accessing
11 the operating system services using procedural function calls compatible with
12 the native procedural interface of the operating system; wherein object-oriented
13 statements defined by the object-oriented class library are insertable into the
14 application to enable the application to access in an object-oriented manner the
15 operating system services during run-time execution of the application in the
16 computer.

2. A computer program product, adapted for use with a computer comprising a procedural operating system having a native procedural interface, the computer program product comprising:

a) a storage medium readable by the computer; and

(b) a code library, stored in the storage medium, comprising computer program logic implementing an object-oriented class library, the object-oriented class library comprising object-oriented classes for enabling an object-oriented application to access in an object-oriented manner services provided by the operating system, the object-oriented classes comprising methods for accessing the operating system services using procedural function calls compatible with the native procedural interface of the operating system;

(c) wherein object-oriented statements defined by the object-oriented class library are insertable into the application to enable the application to access in an object-oriented manner the operating system services during run-time execution of the application in the computer.

4. A computer implemented method of enabling a procedural application to access in a procedural manner an object-oriented operating system having a native object-oriented interface during run-time execution of the application in a computer, the method comprising the steps of:

a) locating in the application a procedural statement which accesses a service provided by the operating system;

b) translating the statement to an object-oriented function call compatible with the native object-oriented interface of the operating system and corresponding to the procedural statement; and

c) executing in the computer the object-oriented function call to thereby cause the operating system to provide the service on behalf of the application.